

What is claimed is

1. A method for distributing events in a data processing system comprising the steps of:

5       registering one or more recipients desirous of receiving one or more events with a distribution process;

10      in response to receiving events at said distribution process, determining if said one or more recipients are registered to receive said event; and

15      in response to said determination, forwarding said received event from said distribution process to said one or more recipients if said one or more recipients are registered to receive said event or dropping said event if said one or more recipients are not registered to receive said event.

2. The method of claim 1 wherein said one or more recipients are registered by creating a linked list tree comprising an event linked list logically linking one or more event entries, each of said event entries associated with one of said events, and optionally one of one or more process linked lists logically linking respective recipient process entries, each of said recipient process entries associated with said one or more recipients desirous of receiving one or more events.

3. The method of claim 2 wherein each of said one or more process linked lists is associated with one of said event entries in said event linked list.

20      4. The method of claim 3 wherein said step of determining if said one or more recipients is registered to receive said event is performed by parsing said event linked list for matching said received one or more events to one of said event entries and parsing said process linked list associated with said matched event entry in said event linked list for determining recipient process entries associated with said matched event entry.

25      5. The method of claim 2 wherein said event entry comprises an event code identifying said event.

6. The method of claim 5 wherein said event code of said event entry is matched to an event code of said received one or more events.

7. The method of claim 2 wherein said event entry comprises an event count for indicating a number of times said event was received at said distribution process.

8. The method of claim 2 wherein said event entry comprises a next event pointer for pointing to a next said event entry in said event linked list.

5 9. The method of claim 2 wherein said event entry comprises an attach process link list pointer for pointing to one of said process linked lists.

10. The method of claim 2 wherein said recipient processes entry comprises a recipient process identification for providing indexed access.

11. The method of claim 2 wherein said recipient process entry comprises a recipient process queue number for identifying an address of a recipient process queue for receiving said forwarded event from said distribution process.

12. The method of claim 2 wherein said recipient process entry comprises an event control which includes information of an action to be taken upon receiving said forwarded event at said distribution process.

15 13. The method of claim 12 wherein said event control is set to indicate if said event is forwarded in said step of forwarding said received event from said distribution process to said one or more recipients.

20 14. The method of claim 2 wherein said recipient process entry comprises a next process pointer for pointing to a next said recipient process entry in said process linked list.

15. The method of claim 2 further comprising the step of updating said event linked list for adding a subsequent event entry.

16. The method of claim 2 further comprising the step of: updating said process linked list for adding a subsequent recipient process entry.

25 17. A system for distributing events in a data processing system comprising:

means for registering one or more recipients desirous of receiving one or more events with a distribution process;

means for determining if said one or more recipients are registered to receive said event in response to receiving events at said distribution process; and

5 means for forwarding said received event from said distribution process to said one or more recipients if said one or more recipients are registered to receive said event or dropping said event, if said one or more recipients are not registered to receive said event.

10 18. The system of claim 17 wherein said one or more recipients are registered by creating a linked list tree comprising an event linked list logically linking one or more event entries, each of said event entries associated with one of said events and optionally one of one or more process linked lists logically linking respective recipient process entries, each of said recipient process entries associated with said one or more recipients desirous of receiving one or more events.

15 19. The system of claim 18 wherein each of said one or more process linked lists is associated with one of said event entries in said event linked list.

20 20. The system of claim 17 wherein said means for determining if said one or more recipients is registered to receive said event is performed by parsing said event linked list for matching said received one or more events to one of said event entries and parsing said process linked list associated with said matched event entry in said event linked list for determining recipient process entries associated with said matched event entry.

21. The system of claim 18 wherein said event entry comprises an event code identifying said event.

25 22. The system of claim 21 wherein said event code of said event entry is matched to an event code of said received one or more events.

23. The system of claim 18 wherein said event entry comprises an event count for indicating a number of times said event was issued.

24. The system of claim 18 wherein said event entry comprises a next event pointer for pointing to a next said event entry in said event linked list.

25. The system of claim 18 wherein said event entry comprises an attach process link list pointer for pointing to one of said process linked lists.

5 26. The system of claim 18 wherein said recipient processes entry comprises a recipient process identification for providing indexed access.

27. The system of claim 18 wherein said recipient process entry comprises a recipient process queue number for identifying an address of a recipient process queue for receiving said forwarded event from said distribution process.

10 28. The system of claim 18 wherein said recipient process entry comprises an event control which includes information of an action to be taken upon receiving said forwarded event from said distribution process.

15 29. The system of claim 18 wherein said event control is set to indicate if said event is forwarded in said step of forwarding said received event from said distribution process to said one or more recipients.

30. The system of claim 18 wherein said recipient process entry comprises a next process pointer for pointing to a next said recipient process entry in said process linked list.

31. The system of claim 18 further comprising:

20 means for updating said event linked list for adding a subsequent event entry.

32. The system of claim 18 further comprising:

means for updating said process linked list for adding a subsequent recipient process entry.

33. A method for distributing events in a data processing system comprising the

25 steps of:

registering one or more recipient processes desirous of receiving one or more events with a distribution process by creating a linked list tree comprising an event linked list logically linking one or more event entries, each of said event entries associated with one of said events, and optionally one or more process linked lists logically linking respective recipient process entries, each of said process recipient process entries associated with said one or more recipients desirous of receiving one or more events, each of said one or more process linked lists is associated with one of said event entries in said event linked list;

receiving an event at said distribution process;

10 determining if said one or more recipient processes are registered to receive said event; and

forwarding said received event from said distribution process to said one or more recipient processes if said one or more recipient processes are registered to receive said event or dropping said event, if said one or more recipient processes are not registered to receive said event.

34. The method of claim 33 wherein said step of determining if said one or more recipients is registered to receive said event is performed by parsing said event linked list for matching said received event to one of said event entries and parsing said process linked list associated with said matched event entry in said event linked list for determining recipient process entries associated with said matched event entry.

35. The method of claim 33 further comprising the step of updating said event linked list for adding a subsequent event entry.

36. The method of claim 33 further comprising the step of:  
updating said process linked list for adding a subsequent recipient process entry.

25 37. A system for distributing events in a data processing system comprising:  
a linked list tree having an event linked list logically linking one or more event entries, each of said event entries associated with one of said events and optionally one of one or more process linked lists logically linking respective recipient process entries

associated with one or more recipient processes, each of said one or more process linked lists is associated with one of said event entries in said event linked list;

means for receiving events at said distribution process;

means for parsing said linked list tree for determining if said one or more

5 recipient processes are registered to receive a received said event; and

means for forwarding said received event to said one or more recipient processes if said one or more recipient processes are registered to receive said event or dropping said event, if said one or more recipient processes are not registered to receive said event.

38. The system of claim 37 wherein said means for determining if said one or

10 more recipients is registered to receive said event is performed by parsing said event linked list for matching said received event to one of said event entries and parsing said process linked list associated with said matched event entry in said event linked list for determining recipient process entries associated with said matched event entry.

39. The system of claim 37 further comprising a subsequent event entry added to

15 said event linked list.

40. The system of claim 37 further comprising:

a subsequent recipient process entry added to said process linked list.

41. A method for distributing events in a data processing system comprising the

steps of:

20 registering one or more recipient processes desirous of receiving one or more events with a distribution process by creating a linked list tree comprising an event linked list logically linking one or more event entries, each of said event entries associated with one of said events, and optionally one or more process linked lists logically linking respective recipient process entries, each of said process recipient process entries

25 associated with said one or more recipients desirous of receiving one or more events, each of said one or more process linked lists is associated with one of said event entries in said event linked list;

receiving an event at said distribution process;

determining if said one or more recipient processes are registered to receive said event;

forwarding said received event from said distribution process to said one or more recipient processes if said one or more recipient processes are registered to receive said event or dropping said event, if said one or more recipients are not registered to receive said event, if said one or more recipient processes are not registered to receive said event; and

updating said event linked list for adding a subsequent event entry.

42. A method for distributing events in a data processing system comprising the steps of:

registering one or more recipient processes desirous of receiving one or more events with a distribution process by creating a linked list tree comprising an event linked list logically linking one or more event entries, each of said event entries associated with one of said events, and optionally one or more process linked lists logically linking respective recipient process entries, each of said process recipient process entries associated with said one or more recipients desirous of receiving one or more events, each of said one or more process linked lists is associated with one of said event entries in said event linked list;

receiving an event at said distribution process;

determining if said one or more recipient processes are registered to receive said event;

setting an event control in said event entry indicating to send said event or to not send said event; and

forwarding said received event to said distribution process to said one or more recipient processes if said one or more recipient processes are registered to receive said event and said event control indicates to sent said event or dropping said event, if said one or more recipients are not registered to receive said event or said event control indicated not to send said event.

43. A system for distributing events in a data processing system comprising:

a linked list tree having an event linked list logically linking one or more event entries, each of said event entries associated with one of said events and optionally one of

one or more process linked lists logically linking respective recipient process entries associated with one or more recipient processes, each of said one or more process linked lists is associated with one of said event entries in said event linked list;

means for receiving events at said distribution process;

5 means for determining if said one or more recipient processes are registered to receive a received said event;

means for setting an event control in said event entry indicating to send said event or to not send said event; and

means for forwarding said received event to said one or more recipient processes

10 if said one or more recipient processes are registered to receive said event and said event control indicates to sent said event or dropping said event, if said one or more recipient processes are not registered to receive said event or said event control indicated not to send said event.

44. A computer program product within a computer readable medium for causing

15 distribution of events in a data processing system comprising:

instruction means for causing a distribution process to register one or more recipients desirous of receiving one or more events;

instruction means for causing a determination if said one or more recipients are registered to receive said event in response to receiving events at said distribution

20 process; and

instruction means for causing forwarding of said received event from said distribution process to said one or more recipients if said one or more recipients are registered to receive said event or dropping said event, if said one or more recipients are not registered to receive said event.

25 45. The computer program product of claim 44 wherein said one or more recipients are registered by instruction means for creating a linked list tree comprising an event linked list logically linking one or more event entries, each of said event entries associated with one of said events and optionally one of one or more process linked lists logically linking respective recipient process entries, each of said recipient process entries associated with said one or more recipients desirous of receiving one or more events.

46. The computer program product of claim 45 wherein each of said one or more process linked lists is associated with one of said event entries in said event linked list.

47. The computer program product of claim 45 wherein said instruction means for determination if said one or more recipients is registered to receive said event is performed by parsing said event linked list for matching said received one or more events to one of said event entries and parsing said process linked list associated with said matched event entry in said event linked list for determining recipient process entries associated with said matched event entry.

48. The computer program product of claim 46 further comprising:  
instruction means for updating said event linked list for adding a subsequent event

49. The computer program product of claim 46 further comprising:  
instruction means for updating said process linked list for adding a subsequent  
recipient process entry.